

ABSTRACT

Mixtures of sorbitol fatty acid esters useful as low calorie fat substitutes are prepared through a direct esterification process. The process entails the direct esterification of sorbitol with free fatty acids, optionally in the presence of an esterification catalyst. The resulting sorbitol esters have an average degree of hydroxyl substitution ranging from about 3 to about 5.5. This partial esterification leads to a mixture of esters capable of serving as low calorie fat substitutes without undesirable physiological side effects or the need for additives. Furthermore, the direct esterification process proceeds without the need for large amounts of organic solvents or bleaching agents.